Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of:

Inquiry Regarding Carrier Current)	
Systems, including Broadband over)	**ET Docket 03-104**
Power Line Systems)	

To: The Commission

COMMENTS OF BRUCE PAIGE

Bruce Paige hereby respectfully submits comments in response to the *Notice of Inquiry*, FCC 03-100, 68 Fed. Reg. 28182, released April 28, 2003 and corrected May 23, 2003 at 68 Fed. Reg. 32720. In response to several of the questions contained in the Notice, Paige states as follows:

1. I am the holder of an Amateur Extra Class license, with the call sign KK5DO, and currently make use of all Commission-authorized amateur bands from 1.8 to 54 MHz, plus 144 and 430 MHz. I have been active in amateur radio since 1993, specializing primarily in weak-signal communication modes, e.g., long-distance (DX) MF/HF ionospheric propagation and satellite.

2. My primary amateur station is located in my home in Houston, Texas, in a neighborhood consisting exclusively of single-family homes on lots of one-sixth acre. Utility service is by overhead and underground power lines; overhead and underground cable TV; and underground telephone.

3. A recent analysis by Ed Hare, W1RFI, of ARRL, the National Association for Amateur Radio, available on ARRL's Web site, http://www.arrl.org/tis/info/HTML/plc/files/C63NovPLC.pdf, shows that amateur stations such as mine are likely to experience severe interference from Broadband over Power Line (BPL) systems, if the Commission's current rules regarding maximum permitted emissions from such systems are maintained[1]. Amateur stations located in more densely-populated environments, e.g., townhouses and apartments, could be even worse affected. Studies conducted in other countries have produced similar findings. Some of these made use of actual in-the-field measurements[2].

4. At the present emissions limit of 30 microvolts per meter at 30 meters, a half-wave dipole at 28 MHz would see an interfering signal from a BPL system of approximately -75 dBm in a receiving bandwidth of 9 kHz, or approximately -80 dBm in the 3 kHz bandwidth more likely to be employed to receive amateur SSB signals.

5. However, in many suburban residential neighborhoods, to assume a separation distance of 30 meters -- over 98 feet -- between the emitting power line and the amateur station's antenna would be unrealistic. In my case they would be about 40 feet from the overhead 36KV power line to my East and 20 feet from the underground 12KV power line to my

[1] Ed Hare, W1RFI, *Calculated Impact of PLC on Stations Operating in the Amateur Radio Service*, ARRL, November 15, 2002.
[2] For example, see David Lauder, G0SNO, *EMC*, in the June 2003 issue of RadCom, the monthly journal of the Radio Society of Great Britain.

North, and the BPL interference level correspondingly stronger. Most amateur radio operation in the HF bands would be wiped out.

8. The BPL industry maintains that no significant interference to licensed services, including amateur, is likely. In view of the facts presented in these comments, I strongly urge the Commission to require full theoretical and field-testing studies of potential interference to the amateur and amateur-satellite services, and possible corrective and preventative measures, and to take these studies into account in determining how BPL is to be regulated. As a licensed service, amateur radio is entitled under the Commission's Rules to protection from any and all harmful interference from Part 15 devices such as these.

Respectfully submitted,

Bruce Paige

11210 Carvel Lane

Houston, Texas 77072

Telephone: (281) 933-0488

Fax: (507) 262-2697

E-mail: bruce@houston.rr.com

July 7, 2003